## CLAIMS

What is claimed is:

1. A method of acquiring image data of a patient using an imaging device, said method comprising the steps of:

loading a first set of parameters for said imaging device;

collecting image data of a first view according to said first set of parameters;

loading a second set of parameters for said imaging device; and

collecting image data of a second view according to said second set of parameters after a predetermined delay period.

2. The method according to Claim 1, further comprising the step of processing said image data of said first and second views after said step of collecting image data of said second view is completed.

3. The method according to Claim 1, further comprising the step of moving the patient to a second position prior to said step of collecting image data of a second view.

4. The method according to Claim 3, wherein said patient is moved automatically via a drive device for moving an examination table.

5. The method according to Claim 1, further comprising the step of providing a stimulus for prompting said patient to exhale and inhale.

6. The method according to Claim 5, wherein said stimulus includes a visual stimulus.

7. The method according to Claim 5, wherein said stimulus includes an audible stimulus.

8. The method according to Claim 1, wherein said imaging device is a magnetic resonance imaging device.

9. An imaging device for taking a series of images of a patient in sequence using a single injection of a contrast material, comprising:

a magnetic resonance imaging system including imaging coils;

a control system for operating said imaging device to take multiple images in sequence by providing a first set of parameters for said magnetic resonance imaging system, collecting a first set of image data of a first view according to said first set of parameters, providing a second set of parameters for said magnetic resonance imaging system, and collecting a second set of image data of a second view of a second body portion according to said second set of parameters after a predetermined delay period.

10. The imaging device according to Claim 9, wherein said delay period corresponds to an amount of time necessary for a patient to breathe and then hold his or her breath for a subsequent image to be taken.

11. The imaging device according to Claim 9, wherein said control system processes said image data of said first and second views after collecting image data of both said first and second views.

12. An imaging device for taking a series of images of a patient in sequence using a single injection of a contrast material, comprising:

a magnetic resonance imaging system including imaging coils;

an examination table for supporting a patient within said magnetic resonance imaging system, said examination table being movable relative to said magnetic resonance imaging system; and

a control system for operating said imaging device to take two images in sequence by providing a first set of parameters for said magnetic resonance imaging system, collecting a first set of image data of a first view of a first body portion according to said first set of parameters, providing a second set of parameters for said magnetic resonance imaging system, and collecting a second set of image data of a second view of a second body portion according to said second set of parameters after a predetermined delay period.

13. The imaging device according to Claim 12, wherein said control system collects said image data of said second view within a time period corresponding to travel of said contrast material within said patient's vascular system from said first body portion to said second body portion.

14. The imaging device according to Claim 12, wherein said control system processes said image data of said first and second views after collecting image data of both said first and second views.

15. The imaging device according to Claim 12, wherein said control system provides a signal to move said examination table to a second position after said first set of image data is collected.

16. A control system for a magnetic resonance imaging machine including a data collect module which collects image data during a scan sequence of the magnetic resonance imaging machine in response to parameters input into the data collect module and an image processing module which processes the image data and generates an image, the improvement comprising:

a controller for initiating a plurality of scan sequences;

a parameter table manager for managing parameter sets, stored in a parameters table, which are input into said data collect module corresponding to each scan sequence;

a data storage manager for managing the storage of image data corresponding to each scan sequence;

a delay timer for instituting a delay period between each scan sequence; and

a control interface for initiating said image processing module to process said stored image data.

17. The control system according to Claim 16, wherein said control interface initiates said image processing module to process said stored image data after said plurality of scan sequences are completed.

18. The control system according to Claim 16, wherein said control system includes a motor device for moving a table of said imaging machine between scan sequences.



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